DOCUMENT RESUME

ED 307 771 EC 220 280

AUTHOR	Howard, Elizabeth; And Others
TITLE	Preventing Fetal Alcohol Syndrome and Other Alcohol-Related Birth Defects: Teacher's Manual and Student Text. High School Edition.
INSTITUTION	Association for Retarded Citizens, Arlington, TX.
PUB DATE	88
NOTE	80p.; For related document, see EC 220 281. The document is made available through contributions from: Civitan International Foundation, Crown Development Trust Fund, Incorporated, Zeta Tau Alpha Fraternity, Elizabeth Boggs, and the American Contract Bridge League. Photographs will not reproduce well.
AVAILABLE FROM	Association for Retarded Citizens of the United States, 2501 Avenue J, P.O. Box 6109, Arlington, TX 76005 ($5.00).
PUB TYPE	Guides - Classroom Use - Guides (For Teachers) (052) -- Guides - Classroom Use - Materials (For Learner) (051)
EDRS PRICE	MF01/PC04 Plus Postage.
DESCRIPTORS	*Alcohol Abuse; Alcohol Education; *Congenital Impairments; *Drinking; High Risk Persons; High Schools; Lesson Plans; Life Style; Pregnancy; *Prevention; *Special Health Problems; Teaching Methods
IDENTIFIERS	*Alcohol Related Birth Defects; *Fetal Alcohol Syndrome

ABSTRACT

This teacher's manual presents lesson plans for a high-school instructional unit on Fetal Alcohol Syndrome and its less severe manifestations, Alcohol-Related Birth Defects. The lessons cover alcohol's effects during pregnancy, the history of concern about alcohol's effects, consequences of alcohol use in pregnancy, lifestyle risk reduction, and prevention activities. For each of the lessons, objectives are listed and procedures for preparing, presenting, and extending the lessons are offered. Duplication masters are offered for: the related student text, worksheets, evaluations, and transparencies on maternal/fetal blood alcohol concentration and on microcephaly. Teaching tips are offered for incorporating class discussions, role play, and composition into the unit. The 19-page student text covers the subject matter, focuses on lifestyle risk reduction, and includes summary sheets. (JDD)

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PREVENTING

Fetal Alcohol Syndrome and Other Alcohol-Related Birth Defects

Teacher's Manual

high school edition

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Association for Retarded Citizens

PREVENTING

FETAL ALCOHOL SYNDROME
AND
OTHER ALCOHOL-RELATED BIRTH DEFECTS

Teacher's Manual

high school edition

Elizabeth Howard, M.A.T., Deanie Kepler, M.S., and Jerry Adams, Ph.D.

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Crown Development Trust Fund Incorporated, Zeta Tau Alpha Fraternity;
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Association for Retarded Citizens

INTRODUCTION TO THE ARC

What is the ARC?

The Association for Retarded Citizens of the United States is the largest volunteer organization solely devoted to improving the welfare of all children and adults with mental retardation and their families. The Association also provides services to parents and other individuals, organizations and communities for jointly solving the problems caused by retardation.

Who is ARC?

The ARC is people — people with mental retardation, parents and other family members and friends of people who are mentally retarded and professionals who work with them. The ARC is essentially a grassroots organization formed in 1950 by a small group of parents and other concerned individuals. Today there are 160,000 members and 1,300 state and local chapters across the nation.

Why does the ARC exist?

The ARC works to provide more than six million Americans who are mentally retarded and who may have other disabilities with services, employment, training, education, independent living and the opportunity to reach their greatest level of personal fulfillment and potential. The ARC also exists because people with mental retardation need help to ensure that their rights as citizens of this country are protected.

CONTENTS

This teacher's manual is a companion to *Preventing FAS and ARBD*, the Student Text. It presents lesson plans complete with separate activities for above-average and below-average classes. We have also added sections on the advantages and guidelines for using class discussions, role play, and composition. There is also a section of duplication masters: worksheets, evaluations, and transparencies.

Each page is complete unto itself, allowing the teacher to choose among the concepts presented and to present them in different order from ours. Thus, greater flexibility is achieved for the teacher who can tailor the materials to time on hand, from five minutes to a full ten hours (two weeks' class time).

Additional items available to support the curriculum are:

Have Your Heard?, a cartoon booklet teaching prevention of FAS.

10 Projects for Preventing Fetal Alcohol Syndrome (and Other Alcohol-Related Birth Defects), a manual for student involvement in community prevention activities.

TABLE OF CONTENTS TEACHER'S MANUAL

Arcfacts	i
Contents	ii
To the Teacher	iii
Acknowledgements	iv
Teaching Tips	
Composition	v
Role Playing	vi
Discussion	vi
Note	vii
Student Text and Lesson Plans	1-19
Appendix	viii
Composition	
Self-Evaluation	ix
Transparency 1	
(Maternal and Fetal BAC)	x
Transparency 2	
(Microencephaly)	xi
Worksheet for Part 1	xii
Debate	
(Should It Be Against the Law for a Pregnant Woman to Get Drunk?)	xiii
Student-Student Evaluation	
Worksheet	xiv
True/False Test	xv
Surgeon General's Report	xvi
Resources	xvii
Student Text Masters	

TO THE TEACHER

Fetal Alcohol Syndrome (FAS) and its less severe manifestations, Alcohol-Related Birth Defects (ARBD), are coming into focus in the United States as the largest single class of birth defects that are 100% preventable. While the full syndrome occurs in an estimated 1/750 live births, the incidence of babies born with some of these alcohol-related birth defects is said to be ten to twelve times that many. Among known alcohol-abusing women, however, FAS occurs in an astonishing 30% of those live births recorded. The annual cost, then, of alcohol use during pregnancy is counted both in terms of thousands of lives affected by permanent birth defects and billions of dollars spent for health care, education, and lost productivity to our society.

Some motivating beliefs behind our efforts are:

- that ARBD are a tragic waste of our most precious natural resource, our babies,
- that prevention of ARBD will not occur in the research lab, but in the community, utilizing information that is already available.
- that youth, tomorrow's parents, must be informed about the facts that will affect their children.
- that our country's young people can make a big difference in educating and influencing for community change.

Research has shown that even small levels of alcohol consumed during pregnancy may affect the fetus in damaging ways. Moreover, the most critical period for the fetus is in the first trimester, when the mother may not even suspect she is pregnant. For such women, other prevention measures like warning labels on beverage bottles and signs posted at serving locations may be ineffectual. Clearly, an early warning system is imperative. Prevention of FAS, therefore, necessitates a public education campaign.

GOALS OF THE FETAL ALCOHOL SYNDROME UNIT

The following goals have been identified for this high school instructional unit:

- Students will develop an understanding that alcohol in any form is potentially lethal to the unborn and may cause the set of birth defects known as FAS or its less severe manifestation, ARBD.
- Students will develop an understanding that every pregnant woman's individual choices about whether/how much/how often she drinks alcohol primarily determine whether or not she will have a baby with ARBD.
- Students will develop an understanding that the amount of alcohol ingested at different times during the pregnancy will affect the risks of severe birth defects.
- Students will acquire the skills needed to evaluate their own risk of an alcohol-related problem and to identify high and low-risk choices available to them.
- Students will acquire the skills needed to identify and evaluate high-risk peer, family, and societal pressures.
- Students will acquire the personal skills necessary for adopting and maintaining low-risk attitudes about alcohol use during pregnancy.

• Students will experience activities designed to improve their self-image by becoming instrumental in prevention instruction in other schools, public institutions, and community sites.

• Students will experience themselves as important agents for the prevention of ARBD through activities designed to enlist them for prevention work.

How have we attempted to approach the resolution of these goals? We considered the following principles gleaned from our research into FAS, education, prevention, and current instructional programs:

• Young people are aware of the *physical* impact of alcohol on their health.

• Rewards (such as relaxation) of alcohol use must be reconsidered where pregnancy is concerned.

• Prevention efforts should target an early age, when attitudes toward alcohol are still being formed.

• Because accurate information, attitudes, and behavior are not related in a direct cause-effect way, they must be addressed as they pertain to maternal use of alcohol during pregnancy.

• Young people need skills to identify and adopt low-risk choices.

• Values questions concerning alcohol use during pregnancy must center on the belief that ANY FEMALE CAN HAVE A BABY WITH ARBD, AND IF I DRINK DURING MY PREGNANCY, SO CAN I.

• Where possible, such subjective judgment words as "heavy drinking" and "moderate use of alcohol" are to be avoided in favor of actual standard measures of absolute alcohol.

• Strict focus must remain throughout the unit on ARBD. Other elements, such as teenage pregnancy, alcohol-related driving deaths, and alcoholism in general, should be excluded.

• Young people need a sense of membership in a larger society and of playing different roles in that society.

We have provided more information and activities than the average teacher will want. Our purpose is to allow more depth for the more enthusiastic students while covering the surface material well.

ARC of the United States
1987

SPECIAL THANKS TO
Laverne Browning, New Lives School, Fort Worth ISD, Fort Worth, TX
Donald R. Collins, Shelbyville, IN
Deborah Crowe, Arlington, TX, *Arlington Citizen-Journal*
Ray Daugherty, Prevention Research Institute, Lexington, KY
Tom Hartsook, Pioneer Civitan, Fort Worth, TX
Barbara Holsomback, *Fort Worth Star-Telegram*, Fort Worth, TX
R.A. Holt, Ed.D., Hamilton County Dept of Education, Chattanooga, TN
Rex J. Howard, M.D., Chairman TMA Drug and Alcohol Abuse Committee, Whitney, TX
Howard Kelfer, M.D., Child Neurology, Fort Worth, TX
Judy Lowe, New Lives School, Fort Worth ISD, Fort Worth, TX
Mary Murkey, Ph.D., Dallas ISD, Dallas, TX
Laune Nelson, Arlington ISD, Arlington, TX
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Janna Starr, ARC Oregon, Salem, OR
Ann Streissguth, Ph.D., University of Washington Medical School, Seattle, WA
Menta Thompson, Ed.D., Eastern Kentucky University, Richmond, KY
Ann Turnbull, Ph.D., Lawrence KS
Colleen Wieck, Ph.D., St. Paul, MN

Deepest appreciation to Frances Goodman, our secretary, whose skills, wisdom, and wit made the going much easier.

Teaching Tips

COMPOSITION

There are two writing assignments in this unit on prevention of Alcohol-Related Birth Defects: a journal covering the time of the study of the unit (Part I, for average or below average students) and an essay (Part III, for average and advanced students.)

Writing instruction enhances the critical thinking skills of concentration, creative thinking, organization, illustration, evaluation, self-examination, and communication.

AVERAGE OR BELOW AVERAGE STUDENTS

(Part I assignment)

The point of the journal is to give students a forum in which to reflect on the consequences of drinking alcohol during pregnancy. They are to record their daily ideas, experiences, and feelings during the time spent on this unit and on any prevention activities they undertake. Give ten minutes at the beginning of class to write in the journals. Have a topic on the board each day, so that when they come into the room, they can take a seat and begin to write. Some suggested topics:

fetal rights

the mother's rights

responsibilities of parents regarding alcohol use

the government's role in preventing FAS and ARBD

sources of help for drinking mothers

sources of help for babies of drinking mothers

Provide good models for them from other journals, i.e., *The Diary of Anne Frank*, *The Lewis and Clark Journals* and *Berlin Diary*. Your librarian can find dozens of examples.

Make either a class collection of journals for display, or type entries from different journals to make a single class journal.

Stress the communication of ideas rather than mechanics by giving two grades where necessary.

For those students who cannot proceed through the writing process, allow them to keep their journal on tape.

AVERAGE & ABOVE

(Part III assignment)

Good writing follows a process that must be learned before it can be achieved. The steps of the process are interdependent rather than sequential. Therefore, movement backward through the process is often indicative of mastery.

I. Pre-writing — This stage answers the questions: What do I want to say? Whom do I want to say it to? What facts do I need in my message? and How do I want to present it?

The pre-writing stage includes motivators and interest-getters like interviewing another person, brainstorming, journaling, discussion and reading.

II. Writing — Learning new ideas, developing relationships between thoughts are characteristic of this stage. If the student gets "stuck", he can go back to the pre-writing stage to find answers to those four questions.

III. Rewriting — This stage will probably be done several times in a good paper. Have the students read their papers and answer the following questions:

Are my ideas and details what I wanted to say, or did I "chase rabbits" down trails that led nowhere?

Have I included unimportant sentences?

Will my audience see the purpose of my paper?

Is it organized? by time? by space? by order of importance? other?

Do the sentences flow smoothly when I read it aloud? Do I need transition words like however or therefore?

Is my language specific? (Instead of *a man*, write his name. In place of *city*, write its name, etc.)

How is my spelling? punctuation? usage?

ROLE PLAYING ADVANTAGES:

- Students express their feelings and attitudes.
- Students are rewarded for being creative.
- Students are usually highly motivated.
- Students are preparing for real situations of the future.
- Students are given an opportunity to show their knowledge of a situation.
- Affective learning can be taught and/or evaluated.
- Non-verbal communication is used.
- Students learn to "think on their feet."
- Students develop the ability to remain calm in adversity and/or pressure.

ROLE PLAYING GUIDELINES

- Design the situation in detail beforehand.
- Define the role.
- Write out the situation and the roles for future use.
- Give students a short time to collect their thoughts.
- Instruct other class members to take notes and tell them what to look for.
- Evaluate students' performance afterwards.
- Re-enact, if necessary, to improve the activity.
- Reverse roles if emotions get out of hand.
- Establish an atmosphere of freedom and security in the classroom.

CLASS DISCUSSION ADVANTAGES:

- Students can utilize cognitive information and reach higher levels in response to each other.
- Students develop affectively through challenging and defending attitudes.
- Students develop questioning skills and the ability to "think on their feet."
- Students receive reinforcement in developing a positive self-image.
- Students reveal information about themselves to aid the teacher in better understanding of the students' own social, psychological, emotional, and skill development.

DISCUSSION GUIDELINES

- Students must feel that their ideas are free from judgement and accepted as important. Therefore, it is best not to evaluate the discussion.
- Teacher and student alike must be prepared. Teacher must be familiar with the content to be discussed and provide sufficient information prior to the discussion.
- The topics for discussion should be clearly stated and prove to have relevance for the students.
- Respect silence. Give students time to think.
- Allow students the right not to participate.
- Always summarize the conclusions and opinions at the end of the discussion.

For additional educational materials, write the following organizations:

Alcoholics Anonymous World Services, Inc.
P.O. Box 182
Madison Square Station
New York, NY 10010

National Clearinghouse for Alcohol and Drug Information
P.O. Box 2345
Rockville, MD 20852

National Council on Alcoholism
733 Third Ave.
New York, NY 10017

Note: All the photos are of healthy children with the exception of the baby with FAS on page 5 of the Student Text. That photograph is courtesy of Ann P. Streissguth, Ph.D., University of Washington Medical School, Seattle.

For less advanced students, assign a journal to be kept of their "Preventing FAS and ARBD" unit, recording their feelings, ideas, and experiences. (See "COMPOSITION" teaching tips.)

NOTE:

Be sure that the students know what the Surgeon General's message to pregnant women is. Encourage them to quote it when discussing FAS and ARBD with people outside their class. You may want to give each student his own copy. It is easier for students to remember the Surgeon General and to quote him than to remember research studies.

LESSON PLANS, Part I

OBJECTIVES

1. Students will learn to define FAS and ARBD.
2. Students will learn to explain the causes of FAS and ARBD.
3. Students will learn to identify six types of birth defects caused by maternal use of alcohol during pregnancy.

BEFORE THE LESSON:

1. Copy the student booklets for the students (Masters in Appendix.)
2. Administer the TF test as a pretest to ascertain the understanding of your class as they begin to study FAS.
3. Define the following on the board: teratogen (ter AT o gen): a poisonous substance that damages the unborn child; fetus (FE tus): an unborn baby; and syndrome (SIN drome): a set of symptoms or signs of a disease.
4. Check the overhead projector and its light; have the transparencies showing blood alcohol content for mother and fetus and microcephaly ready to show.

PREVENTING

FETAL ALCOHOL SYNDROME
AND
OTHER ALCOHOL-RELATED BIRTH DEFECTS

Student Text

high school edition

Elizabeth Howard, M.A.T., Deanie Kepler, M.S., and Jerry Adams, Ph.D.

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TABLE OF CONTENTS
STUDENT TEXT

Part I: Introduction

A. To the Student 2
B. Alcohol's Effects 3
C. History of Concern 4
D. The Birth Defects 5
E. Consequences 6

Part II: Lifestyle Risk Reduction

A. Women's Warning 7
B. Whether 8
C. How Much/How Often 9
D. Case Studies 10
E. Lifestyle 11
F. Attitudes 12
G. Pressures 13
H. Saying No 14
I. Message to Fathers 15

Part III: Prevention Activities

A. How to . . . 16
B. Fact Sheet 17
C. Wrap Up 18

Photo: Ron Duncan, Fort Worth, Texas

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PRESENTING THE LESSON:

1. Write "FAS" on the board and then spell out "Fetal Alcohol Syndrome."

2. Explain that birth defects can be caused in different ways. One way is by being exposed to one or more teratogens during pregnancy.

3. Define FAS: a class of birth defects caused by maternal use of alcohol during pregnancy. Explain that the term came about when researchers noticed that babies whose mothers abused alcohol during their pregnancies all resembled each other, following a very definite pattern of appearance and other less visible birth defects.

5. Ask students to read Part I, looking for the answers to the following questions: (worksheet in Appendix.)

a. How long ago did people suspect that alcohol was harmful to unborn children? *as long ago as hundreds of years B.C.*

b. What caused the "Gin Epidemic" and how did it affect English society? *In the 18th century, new distilling methods produced a surplus of cheap gin. Infant mortality rose while the birth rate dropped. Doctors called for controls of this substance that threatened infants.*

c. Why are Dr. William Sullivan's findings among the women in prison important? *His study found that alcohol intake was directly related to the health of infants and fetuses.*

d. What error was published in 1942 about drinking during pregnancy?*that the fetus was protected from damage due to alcohol by the placenta.*

e. What finally happened in 1973? *Fetal Alcohol Syndrome was recognized as a class of birth defects and received its name.*

f. What happens to alcohol in mother's and baby's blood? *It stays concentrated in the baby longer than in the mother.*

g. What are six types of birth defects caused by maternal alcohol use during pregnancy? *mental retardation, facial anomalies, kidney defects, heart defects, bone and joint defects, and emotional and/or behavioral problems.*

h. In the Georgia study, what percent of pregnant women stopped drinking alcohol after being told of its danger to their children? *35%*

i. What percent did not? *65%*

j. What is the difference in birthweight between babies born to drinkers and those born to nondrinkers in the Georgia study? *Nine % of the babies of the drinking mothers weighed less than three pounds, 25% less than five; mothers who stopped drinking had no babies under three pounds and only 11% under five.*

This booklet was designed with you in mind. The authors have an important message to tell you, a message about the damage that is affecting the bodies and minds of our most precious natural resource, our babies. The message is about birth defects caused by alcohol. Birth defects caused by alcohol are especially sad because they are preventable. Our message to women goes something like this:

If you think you might get pregnant, don't drink alcohol.

If you are pregnant and not drinking, don't start drinking alcohol.

If you are pregnant and have been drinking, stop drinking alcohol.

This booklet is different from many other alcohol-education books. We are not talking about the dangers of alcohol outside of pregnancy. Rather, we are hoping that women will not drink during their pregnancy and cause needless suffering to themselves and their babies.

The future of our society depends on healthy generations. You can do your part by being aware of your own lifestyle and the part alcohol plays in it, and also by being agents of prevention work inside your own community. The message we hope you will take to pregnant women is: "Be kind to your unborn baby . . . don't drink."

There are three parts to the booklet: Part I, an introduction, which includes information about alcohol's effects on the unborn, a brief discussion of the birth defects, and a history of concern over birth defects caused by alcohol; Part II, a lifestyle examination, its role in birth defects, a self-test to monitor your lifestyle as it contains attitudes and behavior about pregnancy and alcohol use, assertiveness practice, and a message to men about alcohol and pregnancy; and Part III, a community action program in which students alert the public in their school districts about the risks of maternal alcohol use during pregnancy.

PREVENTING

FAS

I. Introduction:

Photo: Ron Duncan, Fort Worth, Texas
Healthy Child

ALCOHOL'S EFFECTS

Fetal Alcohol Syndrome (FAS) is a pattern of mental, physical, and behavioral birth defects. These may develop in the unborn child. They are caused by alcohol use during pregnancy.

When a pregnant woman drinks alcohol, it goes from her stomach into her bloodstream. There it easily passes into the baby's body. At first, the percent of alcohol in the mother's blood is higher than her baby's. Her liver soon uses its enzymes to get the alcohol out of her blood.

A baby's liver, however, cannot do that. It holds the alcohol until the mother's blood is free enough to absorb it from the baby's body. Unborn babies, then, continue to have a high blood alcohol content. This remains long after the mother's blood has begun to remove it from her body. Moreover, babies have been born with alcohol on their breath although their mothers had not taken a drink for several hours.

Alcohol is toxic (poisonous). A high alcohol level in the blood of the fetus can affect the development of the nervous system, brain, and other organs. It sometimes causes the condition known as FAS. Lower levels of alcohol exposure can cause a condition referred to in this text as Alcohol-Related Birth Defects (ARBD). Researchers sometimes call these less severe birth defects Fetal Alcohol Effects (FAE). In this book, we will call the full disorder FAS and the less severe cases ARBD.

k. What is the difference in I.Q. in low birthweight babies born to drinkers and nondrinkers? *75% of the low birthweight children born to women who continued to drink were of low I.Q.; low birthweight children born to women who stopped drinking or never drank were of average I.Q.*

6. Illustrate the blood alcohol content concept with the transparency. (Master in Appendix.) The baby has no opportunity to say no. His delicate developing body is soaking in a solution containing a central nervous system depressant. Point out 1) that although the fetus' BAC — blood alcohol content — never reaches the highest concentration of its mother, one hour after one drink, the fetal BAC is higher than hers; 2) a high concentration of alcohol in the blood affects adult women differently from the fetus. The child on this page illustrates the potential damage of alcohol use during pregnancy.

EXTENDING THE LESSON:

1. Discuss microcephaly (MY cro CEF aly) as one of the symptoms of mental retardation. Statistics determine normal head size. A normal child can have a head size that is comparatively large or small. The size of a child's head is determined by contents and structure of the bones in the head. Heredity, general health, function of cardiac and endocrine systems, and the child's age and weight influence the rate of growth of the head. Microcephaly, however, is present in babies and children whose head size is below the 3rd percentile for their age, sex, and gestation. In most cases, microcephaly is synonymous with microencephaly, an undergrowth of the brain. One of the chief causes of microcephaly is teratogenic exposure which occurs during pregnancy.

Show the transparency depicting relative head size and microcephalic head size. (Master in Appendix.) Explain that the size of the head stays small throughout the life of the child.

2. Assign extra credit reports on alcohol, comparative brain sizes among animals and their intelligence, other teratogens (chemicals, lead, etc.) or the Apgar Scale.

3. For less-advanced classes, distribute the "Worksheet for Part I" found in the Appendix to be filled out as the students read silently. Then continue with the class discussion.

300 B.C.

The risks of alcohol use in pregnancy have been suspected for a long time; therefore, this concern is not new. Warnings against alcohol are said to appear in the Old Testament and the Talmud, ancient sacred books. Hundreds of years B.C., the philosopher Plato supported measures barring alcohol to men and women intending to create children. "Children should not be made in bodies saturated with drunkenness," he said.

1500 A.D.

Later, in the Middle Ages, wine and beer became popular beverages. No one showed much concern about alcohol use during pregnancy except Sir Francis Bacon, an English essayist. He warned pregnant women about their diet and nutrition. He especially warned about wine and stronger alcoholic beverages.

1700

In the eighteenth century, new methods of distillation produced a flood of cheap gin in England. The birth rate dropped, and infant mortality rose. This caused physicians to look closely at possible contributing factors. The economy was prosperous, public health was good. Therefore, they blamed the "Gin Epidemic," as it was called, for the deaths and birth defects.

1899

The first scientific study on fetal effects of alcohol occurred in an English prison in 1899. Dr. William Sullivan studied 120 female prisoners and their 600 babies. He found that women who drank throughout pregnancy had two and a half times the rate of stillbirth and infant death than their non-drinking relatives. He also discovered that several of the alcoholic women who previously had severely affected children LATER GAVE BIRTH TO NORMAL CHILDREN WHEN FORCED TO GIVE UP ALCOHOL DURING IMPRISONMENT.

1910

Interest in the destructive effects of alcohol grew during the early 1900's. There was a national effort to outlaw alcoholic beverages about that time. This was called the temperance movement. In 1910, Dr. Taav Laitenen of Finland observed that mothers who drank during pregnancy often gave birth to low-birthweight babies. Of 19,515 infants born to his patients, the babies of non-drinkers averaged the highest birth weights; those of light drinkers (one beer/day) were next; and the babies born to heavy drinkers were the smallest.

1942

Many early studies and those conducted during the temperance period were tossed aside because they were unpopular. As a result, individual pieces of valuable research were overlooked. In 1942, an erroneous published report confirmed what the public wanted to hear. It wrongly reported that the fetus remained protected from damage due to alcohol within the womb.

1968

However, many doctors continued to see alcoholic mothers giving birth to seriously impaired babies. They began to study the situation further. A medical thesis filed at the University of Paris in 1957 described quite clearly the birth defects of children of alcoholic mothers. In 1968, another Frenchman, Dr. Lemoine, described some of the patterns of birth defects in more than a hundred babies.

1973

That report was followed in 1973 by an independent study of eight unrelated children born to chronically alcoholic mothers. Fetal Alcohol Syndrome was finally identified and named.

1987

With debate about the amounts of alcohol necessary to produce lesser manifestations of the syndrome, the Surgeon General of the United States has issued a statement that there is no known safe level of alcohol use by a woman during pregnancy.

FAS & ARBD

Photo courtesy of A.P. Streissguth

Scientists do not know exactly how much alcohol is harmful to the fetus. However, they know that alcohol seems to affect different children in unpredictable ways. For example, in a set of twins born to an alcoholic woman, the boy had FAS while the girl did not. Furthermore, some women seem to have no bad effects from alcohol use during pregnancy.

What are the specific birth defects caused by alcohol use during pregnancy? They range from severe mental retardation and behavior problems to no apparent damage. There are varying combinations and degrees of severity. However, the full syndrome is characterized by six main types of birth defects: mental retardation, emotional and/or behavioral problems, visible facial abnormalities, kidney defects, bone and joint defects, and heart defects.

The picture on this page shows some of the most visible birth defects of FAS.

Less visible, perhaps, but more widespread, are the disorders that appear when the child goes to school. Research indicates that alcohol may also cause learning disabilities, short attention span, hyperactivity, and behavioral problems.

Clearly, women who drink during their pregnancy must be made aware of the risks to their unborn children.

LESSON PLANS, Part II
OBJECTIVES

1. Students will learn to define *risk to babies* in terms of whether/how much/how often a pregnant woman uses alcohol.
2. Students will memorize or paraphrase the statement for all pregnant women that "Any woman can have a child with FAS or ARBD, and if I drink alcohol while I'm pregnant, so can I."
3. Students will distinguish between preventable and unpreventable birth defects and identify FAS and ARBD as preventable.
4. Students will define "risk potential" and demonstrate its importance by illustrating its effect on unborn babies.
5. Students will assess their own risk potentials for having a child with FAS or ARBD.
6. Students will learn to interpret lifestyle as indicator of risk potential.
7. Students will learn to identify high-risk lifestyle elements.
8. Students will attempt to define the legal responsibility of a pregnant woman regarding alcohol abuse.
9. Students will learn to compute low-risk lifestyle choices from high-risk elements.
10. Students will learn to categorize attitudes and behavior and their mutual effects.
11. Students will learn to categorize attitudes as high-risk or low-risk.
12. Students will learn to categorize attitudes as high-risk or low-risk.
13. Students will learn 3 assertive responses to use in resisting high-risk pressures to drink alcohol.
14. Students will analyze the father's role in the health of the pregnancy as it specifically relates to alcohol abuse.

PRESENTING THE LESSON:

1. Discuss the "whether/how much/how often" concept in the light of the preventive nature of FAS.

2. Have students look at the handwritten statement that any woman can have a baby with alcohol-related birth defects, and discuss this idea in the light of whether or not she may be alcoholic. For instance, ask what feelings a pregnant alcoholic might have. What might she do to allay her fears about drinking alcohol while she is pregnant?

3. Explain that this handwritten statement is the most important sentence in the book, and it has tremendous importance to the health and well-being of their future children.

4. Give students a minute to memorize the statement of belief and then ask them to write it verbatim or paraphrase it on the back of their texts.

5. Read "Whether . . ." and discuss efforts to warn women with signs (New York City ordinance in effect now) and labeling of containers of alcoholic beverages (under study in United States Senate.) (See *10 Projects, "Warning Signs"*)

intrauterine growth retardation
signs of altered growth
behavioral gaps
less body activity
inability to learn
increased tremors
poor muscle tone
poor sucking response

Since 1979, the Georgia Alcohol and Pregnancy Research Project has been conducting research on the effects of maternal use of alcohol during pregnancy. This study of 633 women who received care at Grady Memorial Hospital included in depth interviews, blood analysis during the second trimester, and medical follow up of their children. Women included in the study drank at least two drinks of an alcoholic beverage per week. This research yielded the following findings:

PREVENTION. 35% of drinking women stopped using alcohol after being told of its danger to their children.

INFANT OUTCOME. The effects of alcohol on the child were evaluated in several ways: infant death, birth defects, birth weight, withdrawal from alcohol after birth, central nervous system changes, and long-term development.

Infant Death. Women who drank alcohol during pregnancy were 1½ times more likely to lose their babies by miscarriage, stillbirth, or early infant death than those who did not drink.

Alcohol Related Birth Defects. Physical defects occurred in 24% of children whose mothers drank throughout pregnancy. These defects occurred in only 9.5% of the children if their mothers stopped drinking.

Low Birth Weight. Weights below 3 pounds are associated with alcohol and drug use and indicate the likelihood of physical and mental problems. If mothers continued to drink, 9% of their children were less than 3 pounds and 25% were less than 5 pounds. If they stopped drinking, there were no babies under 3 pounds, and only 11% were under 5 pounds. Nondrinkers did not have very low birth weight babies.

Withdrawal From Alcohol After Birth. If mothers continued to drink, 75% of their children showed some signs (i.e., tremors, irritability) of withdrawal from alcohol after birth.

Central Nervous System Changes. Children of normal birth weight who showed no physical birth defects were tested at 3 days of age. 50% of those whose mothers continued to drink showed evidence of effects on the central nervous system.

Long-term Follow Up. After one year, 33% of the babies whose mothers continued to drink showed I.Q. scores lower than 85, while only 5% of children of mothers who stopped or who never drank showed scores that low. 75% of the low birth weight children born to women who continued to drink were of low I.Q. However, low birth weight children born to women who stopped drinking or never drank were of average I.Q. Among affected children, the defects persisted into the pre-school period.

from The Georgia Alcohol and Pregnancy Research Project
Human and Behavior Genetics Laboratory, Georgia Mental Health Institute
Department of Psychiatry, Emory University
Presented to the Georgia State Legislature, 1986, by Arthur Falek, Ph.D., Iris Smith, MPH, and Claire D. Coles, Ph.D.

II. Lifestyle Risk Reduction:

QUESTION: Who has babies with FAS and ARBD?
ANSWER: Women who drink alcohol during their pregnancies.

The more alcohol a pregnant woman drinks, the more at risk she is of having a baby with ARBD. However, there is a reduction of risk as alcohol is removed from the pregnancy. We can be certain that a woman who drinks NO alcohol at all during pregnancy is at NO risk whatsoever of having a baby with Alcohol-Related Birth Defects.

Therefore, A WOMAN WHO DRINKS ALCOHOL DURING HER PREGNANCY PLACES HER CHILD AT RISK! How much she drinks and how often she drinks determine the severity of the risk.

A woman does not have to be alcoholic to place her baby at risk. All she has to do is to drink alcohol during her pregnancy. It is important, then, that all women believe that

Any woman can have a child with alcohol-related birth defects, and if I drink alcohol while I'm pregnant, so can I!

Remember: A PREGNANT WOMAN NEVER DRINKS ALONE!

6. Ask the students to look at "How Much/How Often?" and assess the risk of a pregnant woman who drank an average of 3 drinks per day.

7. Administer the "Am I at Risk?" check test to ascertain students' own risk potential. Discuss the validity of the risk-potential concept in terms of
   a. high school students
   b. pregnant women
   c. adults
   d. the elderly

Scoring the "Am I at Risk" test:

____ 1. Yes = 5 No = 0
____ 2. Yes = 1 No = minus 5
____ 3. Yes = 1 No = 0
____ 4. Yes = 2 No = 0
____ 5. Yes = 4 No = 0
____ 6. Yes = 2 No = 0
____ 7. Yes = 2 No = 0
____ 8. Less than six-pack = 1, 1-2 six packs (6-7 mixed drinks) = 5, more = 6
____ 9. Yes = 2 No = 0
____ 10. Yes = 2 No = 0

____ TOTAL

0-5 = Low Risk,
6-10 = Medium Risk,
Over 10 = High Risk * *

* * If you score in the "high risk" category because of family history, peer drinking, or personal alcohol use, you will know that you need to be careful about your alcohol intake during periods when you or your spouse could be pregnant.

8. Discuss the relationship of attitudes to behavior in statements like, "I know it's bad for me to smoke, but I do it anyway." Then compare that statement to, "I know it's bad for me to drink alcohol while I'm pregnant, but I do it anyway." What are the relative outcomes of each of the discrepancies between knowledge and behavior? See discussion tips.

9. Have 2 students read the case studies. Then discuss the apparent lifestyles of the people in them as those lifestyles specifically pertain to alcohol: What they probably drank, with whom, and how much/how often.

10. Read the Surgeon General's report. (Master in Appendix.)

11. Have students complete the section "Moving Towards a Low-Risk Lifestyle." Discuss ways to reduce the risks of FAS and ARBD.

12. Have students compare their own attitudes with prevalent attitudes and myths in our society. Have students discuss them: whether they themselves say them, hear them, and/or believe them. Get students to add more statements to the list. Ask them to oppose them with low-risk attitudes.

13. Read "The Bottom Line". Assign parts to students to read. Then role-play one or two others: Your sister has just dropped out of school because she is pregnant. Really depressed, she asks you to go with her to get loaded. What's your bottom line? Play it out.

Photo: Ron Duncan, Fort Worth, TX

Whether . . .

Obviously, only women who drink alcohol during pregnancy are at risk of having a baby with alcohol-related birth defects. Moreover, these defects are 100% preventable. The ideal time to identify the high risk lifestyle is before the pregnancy begins. Our hope is that if you score in the high-risk category on the check test below, **you will be more likely to reduce your alcohol intake during periods when you or your spouse could be pregnant.**

Furthermore, since the first three months, called the first trimester, are **critical** to the development of organs, warnings to pregnant women may be too late for a woman who is already pregnant but does not know it. Women who do not yet know they are pregnant may not pay any attention to warnings.

Therefore, all women should look at their own alcohol behavior that could cause permanent damage to their unborn babies. To find your own risk potential, answer the ten questions below. Are you at risk of having a baby with ARBD? Is someone you know?

AM I AT RISK? SCORE:

Circle the correct answers on the questionnaire below. Your teacher will help you to interpret your score.

1. Has anybody in your family had a drinking problem?	yes no
2. Do you ever drink any wine, beer, or mixed drinks?	yes no
3. Does your family have traditions that involve alcohol, such as a couple of drinks before dinner?	yes no
4. Do you find that a few drinks help prepare you for emotionally difficult situations?	yes no
5. Do you sometimes get drunk to celebrate special occasions?	yes no
6. Have you gotten into any trouble because of drinking?	yes no
7. Do you believe that getting drunk is just a normal part of growing up?	yes no
8. How much alcohol can you drink?	less than a sixpack 1-2 sixpacks (6 or 7 drinks) more
9. Is drinking an expected part of getting together with your friends?	yes no
10. Do one or more of your close friends drink heavily?	yes no

How Much/ How Often?

10

Below is a summary of research on FAS dealing with alcohol levels and their risks to unborn babies.

AN AVERAGE OF MORE THAN FOUR DRINKS PER DAY:

- greater risks of both full and partial FAS
- sleep disorders
- poor muscle tone, jitteriness, poor sucking response
- mental retardation
- greater risk of baby's death, both before and after birth

AN AVERAGE OF TWO TO FOUR DRINKS PER DAY:

- growth delays before birth
- visible signs of growth differences
- an inability to develop like other infants
- an inability to behave like other infants
- slower body activity
- greater shakiness, poor muscle tone
- poor sucking response

FIVE OR MORE DRINKS AT A TIME, RANGING FROM TWICE PER WEEK TO TWO OR THREE TIMES PER MONTH:

- irregular brain formation

(from the National Council on Alcoholism, Prevention and Education)

14. Read "Message to Men." Discuss briefly and take a poll of the class to see how many agree and would try to influence their spouse or girlfriend if they were a father-to-be.

15. Read "For Discussion." Allow some time for a full exchange of opinions.

16. Hold a debate on the question: "Should it be a crime for a pregnant woman to get drunk?" Introduce the debate by reading some of the "For" and "Against" statements on the worksheet in the back. Ask the students to decide which they accept. Then have them move into teams "For" and "Against."

They are to elect a spokesperson for each team and a recorder, who will write the argument. Toss a coin to see which team gets to start. Team 1 then drafts a *simple sentence* in response. Team 1 has three minutes to respond, and so on for five or ten rounds.

After each round, ask if there are any who want to change sides. Then allow the switch.

A jury made of other teachers or undecided students can decide the winner of the debate.

EXTENDING THE LESSON:

1. Have students write their discussions of:
   a. risk
   b. whether/how much/how often
   c. the preventability of FAS and ARBD.
2. Have students keep a record in one evening of television viewing of:
   a. the number of alcoholic beverage commercials
   b. the number of times people displayed positive attitudes toward alcohol
3. Ask students to report on the old movies, "Barefoot in the Park," "Lost Weekend," "Days of Wine and Roses," or others where alcohol plays a big role. Get them to look at alcohol's place in the plot, setting, characters, action, title. (Rental movies or taped programming will provide access to the movies.)
4. Assign a report on assertiveness books like *When I Say No, I Feel Guilty*.
5. Get an assertiveness training instructor from the nearest community college to visit your class and/or school to demonstrate assertiveness methods.
6. Call your local Association for Retarded Citizens and ask for a volunteer speaker to come to your class and/or school to talk about lifestyle changes after a child with mental retardation is born.

case studies . . .

11

1.

One of the doctors at the meeting said, "I drank during my last pregnancy. Not a lot, but I'd have a cocktail before dinner and maybe a glass of wine. When my son was born, he turned out not to be as bright as his brother and sister. He worked very hard in school and always brought home only average grades. Today he's one of the finest young men you'd ever meet — charming and hard working. . . . But he still isn't bright like our other kids. I really believe that I sipped away his I.Q., a point at a time. Now I tell all my pregnant patients: NO ALCOHOL AT ALL!"

2.

Pat leaned back in her chair, hands folded in her lap, and began to talk softly.

"I couldn't cope with anything. When I got pregnant the third time in four years, I was a basket case. My husband was working on his engineering degree at the University of Florida. He was also working part time to support us all. I was so lonely I thought I was going to die. All I had to do was to look after two babies all the time. Alcohol made me feel better. I really believed it made me a better mother because I wasn't so grouchy all the time. Was I wrong!

"I got to where I was having two or three shots of whiskey a day. I had heard that beer does not hurt the baby, so I was drinking five or six beers in a day, too. I did not feel that I was taking too much of a risk. After all, you can just **feel** it when you are drinking too much or it is dangerous for your baby. Or at least I thought you could. One of my friends drank five or six glasses of hard liquor a day during her pregnancy and her baby is healthy. She assured me that I was not hurting my baby.

"When Janie was born, she looked different. Her head was unusually small and she just looked different. The doctor said she had Fetal Alcohol Syndrome. Usually children with this problem are mentally retarded. We called a local Association for Retarded Citizens. They helped us find a good program to help Janie at an early age. She is in the third grade now. Janie is still slow to learn things and small for her age. However, all the extra care she has gotten is helping her develop the ability to live a happy life.

"Janie will always be mentally retarded. I can't change that. But I am so grateful that I have a chance to tell other mothers what happened to me. This doesn't have to happen to them!"

lifestyle . . .

12

These case studies clearly show how a pregnant woman's LIFESTYLE affects the development of her baby. Both social and problem drinking present considerable risks to pregnant women. Unfortunately, we live in a high-risk society. Alcohol is shown as desirable in every public medium, from radio and television to magazines, books, and movies. We grow up "brainwashed" to consider alcohol a part of our lives that poses few problems if we control it. The truth is that, controlled or not, alcohol causes mental retardation and other birth defects. Each year, up to 36,000 babies are born with some kind of alcohol-related birth defect. For pregnant women, a lifestyle that includes alcohol becomes a "deathstyle."

Moving Toward a Low-Risk Lifestyle

Look back at page 9 and list the three highest-scoring items on the questionnaire.

1.

2.

3.

Is there anything you could do to lower the risk of having a baby with birth defects? Remember that not drinking any alcohol at all is one of your choices. You can reduce your risk of having a baby with ARBD to ZERO.

FOR LESS ADVANCED STUDENTS

1. Have students list the responsibilities of each class of individuals as they are being mentioned in "Creative Discussion."
2. Allow students to quote sentences from their booklets to illustrate the concepts of risk, whether/how much/how often and the preventability of FAS and ARBD. Their instructions: "Go through your booklets and copy the sentences which illustrate and/or define these concepts.

EXPERIMENT

Mix one ounce of red food color in four ounces of water (in a wine glass), in 12 ounces of water (in a beer glass), then put one ounce in the bottom of a cocktail glass. Show the students the different solutions and ask which "drink" has the most red food color in it.

This graphically illustrates the same alcohol content concept of wine, beer, and hard liquor.

For added fun, allow the students to set up a booth with the three containers and to poll the students in their school about "Which has more?"

Attitudes and behavior are closely related to each other. However, we cannot say that one causes the other. Obviously, people sometimes do things that they know are unhealthy, such as drinking alcohol. They sometimes avoid activities they have positive attitudes about, such as exercise. Generally speaking, however, our attitudes contribute to our behavior. The things we do often contribute to our attitudes about those actions. A real risk factor, then, is the attitude of our society toward alcohol use. Since we tend to conform to the behavior of people around us, a pregnant woman could have a high-risk behavior without ever examining her attitudes. She may be drinking because her friends drink.

Information affects both attitudes and behavior sometimes. And attitudes and behavior often block information from doctors and others. Those who try to help are sometimes ignored or resisted. Consider the case of a woman who drinks heavily during her pregnancy. When the doctor tells her of the risk to her baby, she continues to drink. "It'll never happen to me," she thinks. She resents her doctor's advice. She believes that he is preaching to her.

Below are some attitudes about drinking that are common in our society.

"When it's time to relax, it's time for a beer."
"A little bit won't hurt, even if you're pregnant."
"Beer and wine are not as harmful as hard liquor."
"Everybody drinks."
"Getting drunk is all right on special occasions."

Photo: Ron Duncan, Fort Worth, Texas

A common error is the belief that beer and wine are not as harmful as hard liquor. In the following illustration, you can see that a can of beer, a glass of wine, and a cocktail all have about the same amount of pure alcohol.

4 oz. wine
x 12% alcohol
48 oz. alcohol

12 oz. beer
x 4% alcohol
48 oz. alcohol

1 2 oz. of liquor
x 40% alcohol
48 oz. alcohol

As they are stated, the attitudes on the previous page are not based on truth. Other beliefs that may lead pregnant women to think that alcohol will not hurt their babies are:

- The important thing about drinking is controlling it.
- If it were really harmful to pregnant women, the government would make the manufacturers label it, like cigarettes.
- There aren't many recreational activities that do not involve drinking.
- It will hurt your host's feelings if you don't drink.
- You'll miss all the fun if you don't drink.
- Drinking makes you feel good.
- Nobody will go out with you if you don't drink.

Friends often apply pressure to drink alcohol. Sometimes not going along with the crowd is very difficult. No one wants to be thought an oddball. However, when it comes to drinking during pregnancy, the consequences fall heavily on the pregnant woman.

Where are the friends when the child is born? When he or she cries all night? When he or she starts to school? Alcohol's effects are permanent. Birth defects are an enormous price to pay for following friends. Birth defects cheat the parent who has to care for the child. They rob the child who loses his or her right to physical and mental health.

Friends are not the only source of high-risk pressures, however. Take a look at the following family considerations. Are any of them high-risk for you?

- alcoholic parents?
- drinking in the home?
- too much free time?
- alcohol-abusing relatives?

THE BOTTOM LINE

This strategy works because YOU stay in control. Simply identify your low-risk or no-risk behavior and make that your "bottom line." It works this way:

Friend:	"I have a bottle of wine in my car. Let's go have a drink."
You:	"No, thanks. I'm not going to drink while I'm pregnant."
Friend:	"Just two drinks. It won't hurt."
You:	"I've decided not to drink while I'm pregnant."
Friend:	"Are you mad at me? You used to be a lot more fun."
You:	"I understand why you'd think that, but I'm not going to drink while I'm pregnant."
Friend:	"Is there an echo in here? Why do you keep saying the same thing?"
You:	"Because I've decided not to drink while I'm pregnant."

You get the idea. No matter what argument they give you, you repeat the bottom line. Tempers might flare, yours and theirs. But they will eventually have to give up and honor your decision not to drink.

ASSERTIVENESS

Another source of ways to say no are books on assertiveness training. *When I Say No, I Feel Guilty* is especially good. Your librarian can help you find other titles. An assertiveness training instructor would be another good source of information. Perhaps you can get one to visit your class or social group. Or maybe there are classes at the local junior college in assertiveness training. This is well worth the time for people who tend to go along with the crowd and forfeit their own well-being.

The last method of saying "NO THANKS" is to JUST SAY "NO"!

"No, thanks, I'm driving."
"No, thanks, I've got to study."
"No, thanks, I'm not interested."
"No, thanks, I'm pregnant."
"No, thanks, I'm on a diet."
"No, thanks, I don't drink."
"No, thanks, I don't like it."

Photo: Ron Duncan, Fort Worth, Texas

MESSAGE TO FATHERS

It is the mother's responsibility to know how to care for the unborn baby during pregnancy . . . right?

She will do most of the child care . . . right?

She is best equipped to know how to handle issues about pregnancy . . . right?

It is her body she is taking care of . . . right?

It is her own fault if she drinks too much during pregnancy . . . right?

MAYBE NOT!

You can help the mother prevent a disability in your child.

You can share the responsibility of giving your baby the best possible start.

You can support the mother's decision not to drink alcohol during pregnancy.

Creative discussion

Some years ago, there was a movement in this country to do away with school taxes. Some people thought that people who owned property did not necessarily have children in public schools. Hence, they should not be taxed for schools. This motion was opposed and eventually defeated, for the following reason.

A society's future depends upon an educated electorate. Since the people who own property have a very real investment in the continued well-being of that society, it is in their best interests to support public schools. The situation remained unchanged: schools are supported through property taxes, regardless of whether or not the property owners have children.

The same principle applies to the question of birth defects. All people in society have a very real interest in the health and well-being of its citizens. There are no people who are not responsible for prevention of birth defects.

What are your opinions regarding the responsibilities of the following (pertaining to birth defects PREVENTION?)

- the elderly?
- politicians
- children
- high school and college students
- teachers
- ministers and counselors
- doctors and nurses
- boyfriends and husbands

LESSON PLANS, Part III

OBJECTIVES

1. Students will assess their own desires to participate in prevention activities.
2. Students will identify areas of concern and possible activities open to students.
3. Students will learn and demonstrate through role play the five suggestions for prevention work.
4. Students will organize individual and/or group activities, at least one per student, and carry them out.
5. Students will evaluate their own FAS and ARBD knowledge.

III. COMMUNITY ACTION:

HOW TO . . .

When you talk to others about prevention, remember the following:

- BE OPTIMISTIC. Stress the fact that FAS is preventable.
- BE HONEST. Tell the truth about maternal alcohol use.
- STRESS POSITIVE EXPECTATIONS. Remember that not all women who drink excessively have babies with birth defects. Concentrate on reducing the risk.
- STRESS THE FACT THAT HELP EXISTS, from doctors, counselors, Alcoholics Anonymous, alcohol treatment programs, and the Association for Retarded Citizens.
- TAKE THE FACT SHEET ON FAS AND ARBD (following page) WITH YOU.

FACT SHEET

FETAL ALCOHOL SYNDROME (FAS) and ALCOHOL-RELATED BIRTH DEFECTS (ARBD)

1. WHAT ARE FAS AND ARBD?

Fetal Alcohol Syndrome (FAS) is a particular pattern of three or more birth defects caused when a woman drinks alcohol during pregnancy. Alcohol-Related Birth Defects (ARBD) includes less severe birth defects of the same pattern.

2. HOW ARE FAS AND ARBD CAUSED?

Alcohol is a teratogen (ter-AT-o-gen), a poison for the unborn baby. Nourishment for the unborn baby comes through the mother's placenta (pla-CEN-ta). Alcohol also passes freely from mother to child through the placenta. When a pregnant woman drinks alcohol, therefore, the same amount of alcohol that is in her blood is also in her baby's. However, while an adult's liver is able to handle alcohol at the rate of an ounce of alcohol every two hours, a baby's liver cannot. High concentrations of alcohol stay in the baby's body longer . . . often as long as 24 hours. Alcohol can do the most damage when the unborn baby is developing his or her vital organs.

3. IS THERE A SAFE AMOUNT OF ALCOHOL THAT A PREGNANT WOMAN MAY DRINK?

No. A safe level of alcohol use for pregnant women has not been established. Alcohol-Related Birth Defects (ARBD) have shown up in babies whose mothers drank one or two drinks per day. As much as six drinks per day may cause Fetal Alcohol Syndrome.

4. IS ALCOHOL SAFE AT ANY TIME DURING PREGNANCY?

No. Researchers have not established a safe time to drink during pregnancy. Doctors divide pregnancy into three month periods called trimesters (tri-MES-ters). The first three month period of pregnancy is when developing organs are most at risk of damage. Women do not even know that they are pregnant during part of this time. During the second trimester, the mother's use of alcohol can increase the chances of sudden death of the unborn baby or expulsion from the mother's body (called spontaneous abortion). Alcohol use during the final trimester can interfere with the growth of the baby . . . including the growth of the brain.

arc
Association for Retarded Citizens of the United States, 2501 Ave. J, Arlington, Texas 76006 (817) 640-0204

5. WHAT ARE THE PROBLEMS OF CHILDREN BORN WITH THESE DISORDERS?

Typically, children born with FAS and ARBD have the following symptoms:

- Low weight at birth and failure to catch up with others of the same age
- Head:
  - Small head size
  - Narrow eye slits
  - Flat midface
  - Low nasal ridge
  - Loss of groove between nose and upper lip
- Central nervous system:
  - Mental retardation
  - Alcohol withdrawal at birth
  - Poor sucking response
  - Sleep disturbances
  - Restlessness and irritability
  - Delays in development
  - Short attention span
  - Learning disabilities
- Organs and parts of the body:
  - Muscle problems
  - Bone and joint problems
  - Genital defects
  - Heart defects
  - Kidney defects

6. HOW MANY BABIES ARE BORN WITH FAS OR ARBD?

The Public Health Service estimates that FAS occurs in approximately one of every 750 live births. Less severe Alcohol-Related Birth Defects occur in approximately 10-12 per 1000 live births, or 36,000 each year. However, 30% of the babies of known alcohol-abusing mothers have FAS!

7. HOW CAN FAS BE TREATED?

Surgery can repair some of the physical problems. Schools and day care centers offer programs to improve mental and physical development. However, Alcohol-Related Birth Defects are permanent. Children with FAS remain below average in physical and mental development.

This document is available due to contributions from:
Civitan International Foundation, Crown Development Trust Fund Incorporated, Zeta Tau Alpha Fraternity, Elizabeth Boggs, Ph.D., and the American Contract Bridge League.

BEFORE THE LESSON:

Read *Ten Projects for Preventing Fetal Alcohol Syndrome*, looking for the projects that your class might carry out. Choose the ones you want and reproduce them for your students.

PRESENTING THE LESSON:

1. Discuss the options for class and/or individual projects. Then have students choose an activity to work on. Record their choices and explain that you will give them their assignments the next day. Copy and distribute pages from "10 Projects for Preventing FAS." Let groups meet to decide tasks and deadlines.
2. Read the prevention communication rules on page 17. Ask students to give examples of each rule.
3. Ask the Quick Check Questions orally.
4. Administer the final TF evaluation.
5. Administer the student evaluation worksheet.

EXTENDING THE LESSON:

1. Role play the Creative Questions in the light of the prevention suggestions.

2. Writing assignment: (See teaching tips on composition and self-evaluation master in Appendix.) Use the role play or a class discussion as prewriting activity. Then ask each student to choose an essay topic by taking a subject out of the role/play discussion and developing it. Sample topics: "A pregnant woman's resources to help her stop drinking," "Good prenatal care," or "Educating the child with FAS."

Distribute the self-evaluation worksheet for the student to evaluate his own work. Rewrite, then revise. As revision work, allow the students to evaluate each other's work by trading with a partner and answering the following questions: (evaluation worksheet in back) Is it logical? Is it well organized? Is spelling and punctuation accurate? How would I improve this paper? What grade would I assign to this paper if I were teaching this class? The paper is then given back to its writer for rewriting, along with the student evaluation. When the teacher collects the papers, he collects the original draft, the self-evaluation, the student evaluation, and the rewrite, and he then evaluates all three.

3. For less advanced students, allow them to use their notes to find the answers to the Creative Questions and to write them out.

Photo: Ron Duncan, Fort Worth, Texas

Healthy Child

QUICK CHECK

Do you know . . .

What the Surgeon General said in his report on maternal use of alcohol during pregnancy?

The various risks of different levels of alcohol used by pregnant women?

The kinds of birth defects caused by alcohol?

The correct way to talk about prevention effectively?

Whether you have a lifestyle that might lead you into having a baby with FAS or ARBD?

Whether the messages you are receiving from friends, family, and society are high- or low-risk to your future children?

Whether there is a place for you in prevention work?

How to refuse alcohol when it is not in your baby's best interest to drink it?

Why FAS is as much a concern for men as for women?

CREATIVE QUESTIONS

What is wrong with the statements below? What would you do if someone told these things to you during your prevention work? How can you respond according to the suggestions on page 17?

"I got drunk before I knew I was pregnant, and now I'm so scared about my baby's health that I can't stand it!"*

"Women who can't stop drinking are in real trouble. It looks as though they are destined to have a child with mental retardation."

"What I do before my baby gets here is my doctor's responsibility."

"Our society is doomed because so many people drink alcohol that it's impossible to prevent these birth defects."

Photo: Ron Duncan, Fort Worth, Texas

Healthy Children

** Recent studies indicate that whenever drinking is stopped during pregnancy, the risk of FAS or ARBD is decreased.*

APPENDIX

COMPOSITION SELF EVALUATION

Read your paper and answer the following questions about it.

1. Are my ideas and details what I wanted to say, or did I "chase rabbits" down trails that led nowhere?

2. Have I included unimportant sentences?

3. Will my audience see the purpose of the paper?

4. Is the paper organized? by time? by space? by order of importance? other?

5. Do the sentences flow smoothly when I read it aloud? Do I need transition words and phrases like **however, therefore,** or **the next day**?

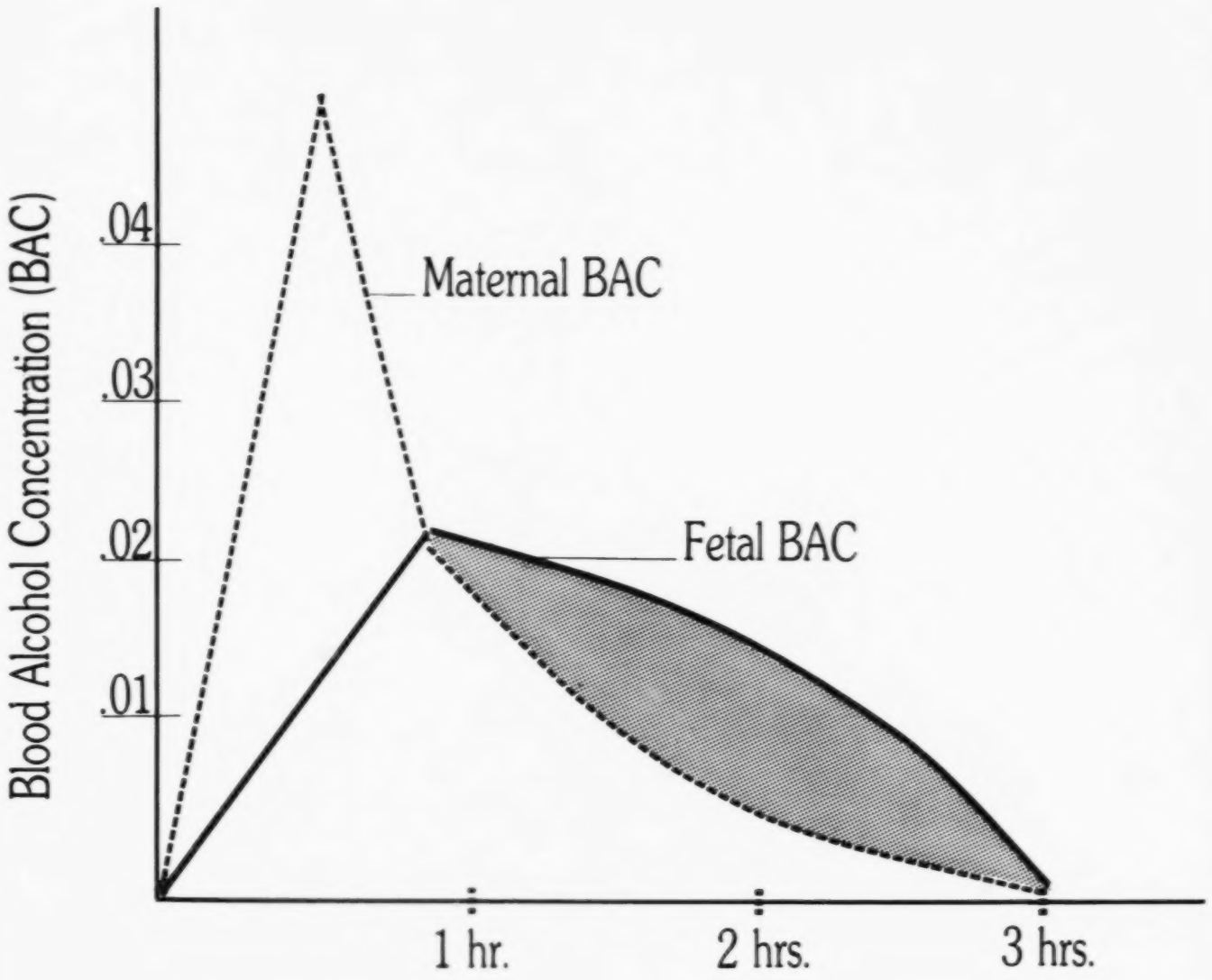
6. Is my language specific? (Instead of **a man**, write his name. In place of **city**, write its name.)

7. How is my spelling? punctuation? usage?

Transparency 1

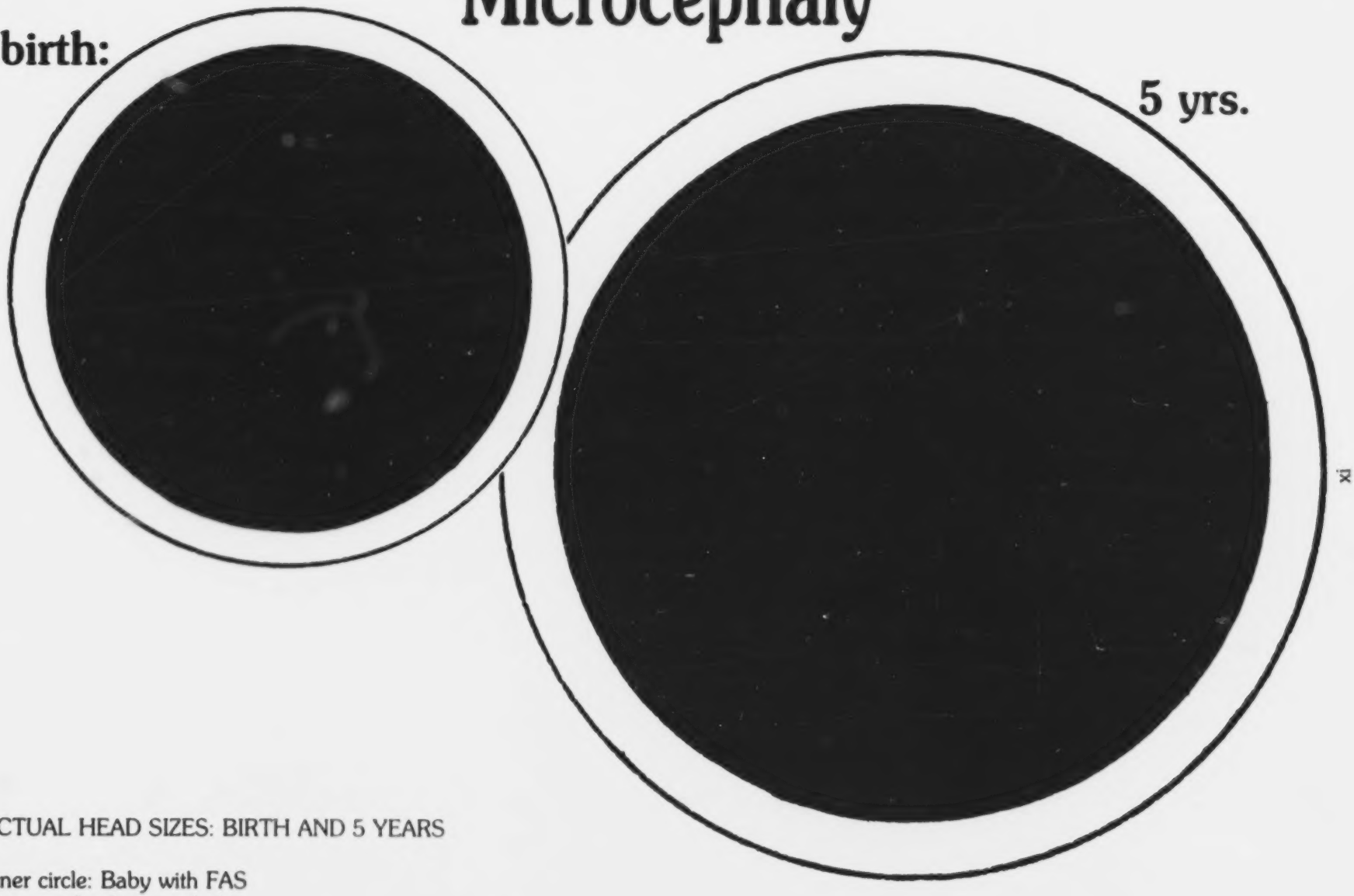
Maternal and Fetal BAC: 1 Drink

(based on a graph by H.L. Rosett)



..... Maternal BAC
_____ Fetal BAC
_____ 2+ hours: Fetal BAC higher

Microcephaly



ACTUAL HEAD SIZES: BIRTH AND 5 YEARS

Inner circle: Baby with FAS
Outer circle: Average baby

View: Looking down at the top of the head

Transparency 2

Worksheet for Part I

As you read, find the answers to the following questions:

a. How long ago did people suspect that alcohol was harmful to unborn children?

b. What caused the "Gin Epidemic" and how did it affect English society?

c. Why are Dr. William Sullivan's findings about the women in prison important?

d. What error was published in 1942 about drinking during pregnancy?

e. What finally happened in 1973?

f. What happens to alcohol in mother's and baby's blood?

g. When was FAS granted recognition as a class of birth defects?

h. What are six types of birth defects caused by maternal alcohol use during pregnancy?

i. In the Georgia study, what percent of pregnant women stopped drinking alcohol after being told of its danger to their children?

j. What percent did not?

k. What is the difference in birthweight between babies born to drinkers and those born to nondrinkers?

l. What is the difference in I.Q. in low birthweight babies born to drinkers and nondrinkers?

Should It Be Against the Law for a Pregnant Woman to Get Drunk?

Debate Rules (Part II)

1. Take a stand — for or against. This is an excellent opportunity for you to make your own stand independent of what others think.

2. Divide into two groups: "For" and "Against."

3. Elect a spokesperson who will do your talking.

4. Elect a "recorder" who will write the arguments for the recorder to read.

5. The winner of the coin toss is Team 1. Team 1 writes a **single sentence** to state their position.

6. Team 1 spokesperson then reads the statement to Team 2, who has three minutes to write a **single sentence** to state its position.

7. Team 2 spokesperson reads its statement to Team 1, who has three minutes to answer in a **single sentence.**

8. At the end of each round, anyone may change teams. At the end of ten rounds or so, the jury will declare the winner.

Sample Arguments:

For: It should be a crime to deliberately endanger the health of another person. Society has an obligation to protect children from dangerous situations.

A law designed to protect one person may restrict the freedom of another. A woman may drink, and a woman may become pregnant, but she may not drink while pregnant because it endangers her child.

If the punishment is alcoholism treatment, then the punishment will be fair for all concerned.

If someone is unable to stop endangering others, an enlightened society needs to require alcoholism treatment for its own protection as well as for the person involved.

Alcohol is a proven teratogen (poison to the fetus). How can it be legal to poison someone?

Against: Individual drinking habits are a private matter; prenatal care is private; and child care is private. Therefore, it would set a dangerous precedent to allow the state to regulate what a woman can or cannot do just because she is pregnant. Most laws designed to regulate a person's activity in the privacy of the home do not work and are not enforceable. Why add another unenforceable law to the books?

Any punishment to the mother will punish the child too.

It makes no sense to make drinking illegal for a pregnant woman in a country where abortion is legal.

The law may be well meaning, but the real result of such a law will be that pregnant women who drink will avoid getting medical attention out of fear of getting caught drinking while pregnant.

name:

date:

paper to be evaluated by:

Student-Student
Evaluation Worksheet
Writing Assignments (Part III)

Read the paper you have been given to evaluate and answer the questions below.

Is the paper logical? Do I understand it?

Is it well organized? Does the paper reflect a thoughtful approach?

Is spelling and punctuation accurate?

How would I improve this paper?

What grade would I assign to this paper if I were teaching this class?

TRUE/FALSE TEST

1. Alcohol can cause mental retardation in unborn babies.

2. Only hard liquor will hurt the baby. Beer and wine are OK, especially when used in moderate amounts.

3. Some time after the pregnant woman drinks alcohol, the fetus has a higher blood-alcohol content than its mother.

4. Drinking alcohol can harm the baby in the early days of the pregnancy.

5. The unborn baby is protected from prescription drugs, alcohol, and tobacco by the placenta.

6. Men bear some of the responsibility for preventing birth defects in their children.

7. The mother's drinking during pregnancy can cause learning disabilities.

8. A recent Georgia study showed that mothers who stopped drinking after they were told of alcohol's harmful effects had no babies under three pounds.

9. Four ounces of wine, 12 ounces of beer, and 1.2 ounces of liquor all contain the same amount of pure alcohol.

10. Concern in the United States about FAS and ARBD is fairly recent, starting in 1973.

The Surgeon General says:

"Even without all the answers, there are two things that are beyond dispute. First, the more the mother drinks, the greater are the risks she takes with the health of her unborn baby. Second, there is **no** possibility of having a child with any alcohol-related birth defects — including FAS — if the mother does not drink at all.

"To help ensure that your baby is strong and healthy, I'm sure you will agree that the safest and wisest choice is to avoid alcohol during this most important time of your life and your baby's life."

C. Everett Koop, M.D.
U.S. Department of Health and Human Services
Public Health Service

59

RESOURCES

BOOKLETS

For Women Who Drink, 13 pp.
My Baby . . . Strong and Healthy, 16 pp. DHHS # ADM 86-1436.
Preventing Fetal Alcohol Effects, 20 pp. DHHS # ADM 83-1163.
Women and Alcohol Problems: Tools for Prevention, 27 pp.
from
U.S. Department of Health and Human Services
Public Health Service
Alcohol, Drug Abuse, and Mental Health Administration
write to:
National Institute on Alcohol Abuse and Alcoholism (NIAAA)
5600 Fishers Lane
Rockville, MD 20857

BROCHURES

Alcohol and the Adolescent, from the American Council for Drug Education, 5820 Hubbard Drive, Rockville, MD 20852 or 136 East 64th St., NY, NY 10021.

Alcohol and Your Unborn Baby (1984). from American College of Obstetricians and Gynecologists, 600 Maryland Avenue, SW, Suite 300 East, Washington, D.C. 20024.

Be Good to Your Baby Before It Is Born, March of Dimes.

Recipe for Healthy Babies, March of Dimes.

Pregnant? Before You Drink, Think . . ., March of Dimes.

Drugs, Alcohol, Tobacco Abuse During Pregnancy, March of Dimes.

write to:
March of Dimes
1275 Mamaroneck Ave.
White Plains, NY 10605

FICTION

Robe, L.D. (1980). *Haunted Inheritance*. Minneapolis: CompCare Publications.
This mystery thriller recounts the adventures of Holly Blake when she spends the summer at Lyon House, a great mansion on Long Island. The story weaves in information about alcohol abuse, alcoholism, FAS, and AA for young adults.

write to:
CompCare Publications
2415 Anapolis Lane, Suite 140
Minneapolis, MN 55441

FILMS

I Didn't Mean to Hurt You, Baby
Virginia Department of Mental Health/Mental Retardation
Office of Information and Public Education
P.O. Box 1797
Richmond, Virginia 23214
(804) 786-3909

The Gentle Art of Saying No: Principles of Assertiveness
Turning Off: Drugs and Peer Pressure
Person to Person: Learning to Communicate
Alcohol Facts: For Teenagers Only
Natural Highs and How to Get Them
(accompanying curriculum guides)

The Editors of Sunburst Communications
39 Washington Avenue
Pleasantville, NY 10570-2898
For instant service, call toll free (800) 431-1934.
In New York, call (800) 221-5912.
In Alaska or Canada, call COLLECT (914) 769-5030.

You Have a Choice, Parts I and II
Southerby Productions, Inc.
P.O. Box 15403
Long Beach, CA 90815
Attn: John Walley
Call toll free (800) 243-FILM.
In California call (213) 498-6088.

Alcohol: Crisis in the Unborn
March of Dimes

JOURNALS

Donlan, J. (1977). *I Never Saw the Sun Rise.* Minneapolis: CompCare Publications.
A 15-year-old girl shares her journal writings about her dependency on drugs and alcohol and her treatment and recovery. The entries represent a year and a half of a teenager's life and was printed with only minor changes to the original manuscript. The author has included poems and drawings as well as a narrative describing her feelings and experiences. CompCare Publications, 2415 Anapolis Lane, Suite 140, Minneapolis, MN 55441.

SLIDE PRESENTATION — FAS
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University of Washington
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PREVENTING

FETAL ALCOHOL SYNDROME
AND
OTHER ALCOHOL-RELATED BIRTH DEFECTS

Student Text

high school edition

Elizabeth Howard, M.A.T., Deanie Kepler, M.S., and Jerry Adams, Ph.D.

arc
Association for Retarded Citizens
of the United States
National Headquarters
2501 Ave. J/P.O. Box 6109
Arlington, Texas 76005

TABLE OF CONTENTS
STUDENT TEXT

Part I: Introduction

A. To the Student 2
B. Alcohol's Effects 3
C. History of Concern 4
D. The Birth Defects 5
E. Consequences 6

Part II: Lifestyle Risk Reduction

A. Women's Warning 7
B. Whether 8
C. How Much/How Often 9
D. Case Studies 10
E. Lifestyle 11
F. Attitudes 12
G. Pressures 13
H. Saying No 14
I. Message to Fathers 15

Part III: Prevention Activities

A. How to . . . 16
B. Fact Sheet 17
C. Wrap Up 18

Photo: Ron Duncan, Fort Worth, Texas

This document is available due to contributions from:

Civitan International Foundation; Crown Development Trust Fund Incorporated, Zeta Tau Alpha Fraternity; Elizabeth Boggs, Ph.D.; and the American Contract Bridge League.

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This booklet was designed with you in mind. The authors have an important message to tell you, a message about the damage that is affecting the bodies and minds of our most precious natural resource, our babies. The message is about birth defects caused by alcohol. Birth defects caused by alcohol are especially sad because they are preventable. Our message to women goes something like this:

If you think you might get pregnant, don't drink alcohol.

If you are pregnant and not drinking, don't start drinking alcohol.

If you are pregnant and have been drinking, stop drinking alcohol.

This booklet is different from many other alcohol-education books. We are not talking about the dangers of alcohol outside of pregnancy. Rather, we are hoping that women will not drink during their pregnancy and cause needless suffering to themselves and their babies.

The future of our society depends on healthy generations. You can do your part by being aware of your own lifestyle and the part alcohol plays in it, and also by being agents of prevention work inside your own community. The message we hope you will take to pregnant women is: "Be kind to your unborn baby . . . don't drink."

There are three parts to the booklet: Part I, an introduction, which includes information about alcohol's effects on the unborn, a brief discussion of the birth defects, and a history of concern over birth defects caused by alcohol; Part II, a lifestyle examination, its role in birth defects, a self-test to monitor your lifestyle as it contains attitudes and behavior about pregnancy and alcohol use, assertiveness practice, and a message to men about alcohol and pregnancy; and Part III, a community action program in which students alert the public in their school districts about the risks of maternal alcohol use during pregnancy.

PREVENTING

FAS

I. Introduction:

Photo: Ron Duncan, Fort Worth, Texas

Healthy Child

ALCOHOL'S EFFECTS

Fetal Alcohol Syndrome (FAS) is a pattern of mental, physical, and behavioral birth defects. These may develop in the unborn child. They are caused by alcohol use during pregnancy.

When a pregnant woman drinks alcohol, it goes from her stomach into her bloodstream. There it easily passes into the baby's body. At first, the percent of alcohol in the mother's blood is higher than her baby's. Her liver soon uses its enzymes to get the alcohol out of her blood.

A baby's liver, however, cannot do that. It holds the alcohol until the mother's blood is free enough to absorb it from the baby's body. Unborn babies, then, continue to have a high blood alcohol content. This remains long after the mother's blood has begun to remove it from her body. Moreover, babies have been born with alcohol on their breath although their mothers had not taken a drink for several hours.

Alcohol is toxic (poisonous). A high alcohol level in the blood of the fetus can affect the development of the nervous system, brain, and other organs. It sometimes causes the condition known as FAS. Lower levels of alcohol exposure can cause a condition referred to in this text as Alcohol-Related Birth Defects (ARBD). Researchers sometimes call these less severe birth defects Fetal Alcohol Effects (FAE). In this book, we will call the full disorder FAS and the less severe cases ARBD.

300 B.C.

The risks of alcohol use in pregnancy have been suspected for a long time; therefore, this concern is not new. Warnings against alcohol are said to appear in the Old Testament and the Talmud, ancient sacred books. Hundreds of years B.C., the philosopher Plato supported measures barring alcohol to men and women intending to create children. "Children should not be made in bodies saturated with drunkenness," he said.

1500 A.D.

Later, in the Middle Ages, wine and beer became popular beverages. No one showed much concern about alcohol use during pregnancy except Sir Francis Bacon, an English essayist. He warned pregnant women about their diet and nutrition. He especially warned about wine and stronger alcoholic beverages.

1700

In the eighteenth century, new methods of distillation produced a flood of cheap gin in England. The birth rate dropped, and infant mortality rose. This caused physicians to look closely at possible contributing factors. The economy was prosperous; public health was good. Therefore, they blamed the "Gin Epidemic," as it was called, for the deaths and birth defects.

1899

The first scientific study on fetal effects of alcohol occurred in an English prison in 1899. Dr. William Sullivan studied 120 female prisoners and their 600 babies. He found that women who drank throughout pregnancy had two and a half times the rate of stillbirth and infant death than their non-drinking relatives. He also discovered that several of the alcoholic women who previously had severely affected children LATER GAVE BIRTH TO NORMAL CHILDREN WHEN FORCED TO GIVE UP ALCOHOL DURING IMPRISONMENT.

1910

Interest in the destructive effects of alcohol grew during the early 1900's. There was a national effort to outlaw alcoholic beverages about that time. This was called the temperance movement. In 1910, Dr. Taav Laitenen of Finland observed that mothers who drank during pregnancy often gave birth to low-birthweight babies. Of 19,515 infants born to his patients, the babies of non-drinkers averaged the highest birth weights; those of light drinkers (one beer/day) were next; and the babies born to heavy drinkers were the smallest.

1942

Many early studies and those conducted during the temperance period were tossed aside because they were unpopular. As a result, individual pieces of valuable research were overlooked. In 1942, an erroneous published report confirmed what the public wanted to hear. It wrongly reported that the fetus remained protected from damage due to alcohol within the womb.

1968

However, many doctors continued to see alcoholic mothers giving birth to seriously impaired babies. They began to study the situation further. A medical thesis filed at the University of Paris in 1957 described quite clearly the birth defects of children of alcoholic mothers. In 1968, another Frenchman, Dr. Lemoine, described some of the patterns of birth defects in more than a hundred babies.

1973

That report was followed in 1973 by an independent study of eight unrelated children born to chronically alcoholic mothers. Fetal Alcohol Syndrome was finally identified and named.

1987

With debate about the amounts of alcohol necessary to produce lesser manifestations of the syndrome, the Surgeon General of the United States has issued a statement that there is no known safe level of alcohol use by a woman during pregnancy.

FAS & ARBD

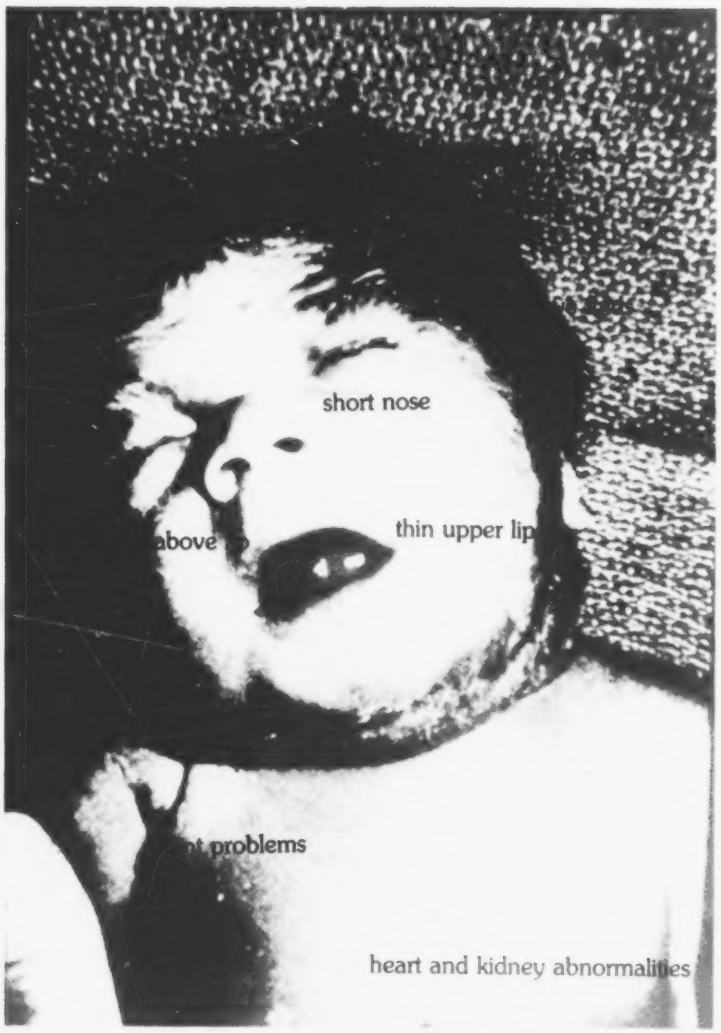

Photo courtesy of A.P. Streissguth

Scientists do not know exactly how much alcohol is harmful to the fetus. However, they know that alcohol seems to affect different children in unpredictable ways. For example, in a set of twins born to an alcoholic woman, the boy had FAS while the girl did not. Furthermore, some women seem to have no bad effects from alcohol use during pregnancy.

What are the specific birth defects caused by alcohol use during pregnancy? They range from severe mental retardation and behavior problems to no apparent damage. There are varying combinations and degrees of severity. However, the full syndrome is characterized by six main types of birth defects: mental retardation, emotional and/or behavioral problems, visible facial abnormalities, kidney defects, bone and joint defects, and heart defects.

The picture on this page shows some of the most visible birth defects of FAS.

Less visible, perhaps, but more widespread, are the disorders that appear when the child goes to school. Research indicates that alcohol may also cause learning disabilities, short attention span, hyperactivity, and behavioral problems.

Clearly, women who drink during their pregnancy must be made aware of the risks to their unborn children.

Since 1979, the Georgia Alcohol and Pregnancy Research Project has been conducting research on the effects of maternal use of alcohol during pregnancy. This study of 633 women who received care at Grady Memorial Hospital included in depth interviews, blood analysis during the second trimester, and medical follow up of their children. Women included in the study drank at least two drinks of an alcoholic beverage per week. This research yielded the following findings:

PREVENTION. 35% of drinking women stopped using alcohol after being told of its danger to their children.

INFANT OUTCOME. The effects of alcohol on the child were evaluated in several ways: infant death, birth defects, birth weight, withdrawal from alcohol after birth, central nervous system changes, and long-term development.

Infant Death. Women who drank alcohol during pregnancy were 1½ times more likely to lose their babies by miscarriage, stillbirth, or early infant death than those who did not drink.

Alcohol Related Birth Defects. Physical defects occurred in 24% of children whose mothers drank throughout pregnancy. These defects occurred in only 9.5% of the children if their mothers stopped drinking.

Low Birth Weight. Weights below 3 pounds are associated with alcohol and drug use and indicate the likelihood of physical and mental problems. If mothers continued to drink, 9% of their children were less than 3 pounds and 25% were less than 5 pounds. If they stopped drinking, there were no babies under 3 pounds, and only 11% were under 5 pounds. Nondrinkers did not have very low birth weight babies.

Withdrawal From Alcohol After Birth. If mothers continued to drink, 75% of their children showed some signs (i.e., tremors, irritability) of withdrawal from alcohol after birth.

Central Nervous System Changes. Children of normal birth weight who showed no physical birth defects were tested at 3 days of age. 50% of those whose mothers continued to drink showed evidence of effects on the central nervous system.

Long-term Follow Up. After one year, 33% of the babies whose mothers continued to drink showed I.Q. scores lower than 85, while only 5% of children of mothers who stopped or who never drank showed scores that low, 75% of the low birth weight children born to women who continued to drink were of low I.Q. However, low birth weight children born to women who stopped drinking or never drank were of average I.Q. Among affected children, the defects persisted into the pre-school period.

from The Georgia Alcohol and Pregnancy Research Project
Human and Behavior Genetics Laboratory, Georgia Mental Health Institute
Department of Psychiatry, Emory University
Presented to the Georgia State Legislature, 1986, by Arthur Falek, Ph.D., Iris Smith, MPH, and Claire D. Coles, Ph.D.

II. Lifestyle Risk Reduction:

QUESTION: Who has babies with FAS and ARBD?
ANSWER: Women who drink alcohol during their pregnancies.

The more alcohol a pregnant woman drinks, the more at risk she is of having a baby with ARBD. However, there is a reduction of risk as alcohol is removed from the pregnancy. We can be certain that a woman who drinks NO alcohol at all during pregnancy is at NO risk whatsoever of having a baby with Alcohol-Related Birth Defects.

Therefore, A WOMAN WHO DRINKS ALCOHOL DURING HER PREGNANCY PLACES HER CHILD AT RISK! How much she drinks and how often she drinks determine the severity of the risk.

A woman does not have to be alcoholic to place her baby at risk. All she has to do is to drink alcohol during her pregnancy. It is important, then, that all women believe that

Any woman can have a child with alcohol-related birth defects, and if I drink alcohol while I'm pregnant, so can I!

Remember: A PREGNANT WOMAN NEVER DRINKS ALONE!

Whether . . .

Obviously, only women who drink alcohol during pregnancy are at risk of having a baby with alcohol-related birth defects. Moreover, these defects are 100% preventable. The ideal time to identify the high risk lifestyle is before the pregnancy begins. Our hope is that if you score in the high-risk category on the check test below, **you will be more likely to reduce your alcohol intake during periods when you or your spouse could be pregnant.**

Furthermore, since the first three months, called the first trimester, are **critical** to the development of organs, warnings to pregnant women may be too late for a woman who is already pregnant but does not know it. Women who do not yet know they are pregnant may not pay any attention to warnings.

Therefore, all women should look at their own alcohol behavior that could cause permanent damage to their unborn babies. To find your own risk potential, answer the ten questions below. Are you at risk of having a baby with ARBD? Is someone you know?

AM I AT RISK? SCORE:

Circle the correct answers on the questionnaire below. Your teacher will help you to interpret your score.

1. Has anybody in your family had a drinking problem?	yes no
2. Do you ever drink any wine, beer, or mixed drinks?	yes no
3. Does your family have traditions that involve alcohol, such as a couple of drinks before dinner?	yes no
4. Do you find that a few drinks help prepare you for emotionally difficult situations?	yes no
5. Do you sometimes get drunk to celebrate special occasions?	yes no
6. Have you gotten into any trouble because of drinking?	yes no
7. Do you believe that getting drunk is just a normal part of growing up?	yes no
8. How much alcohol can you drink?	less than a sixpack 1-2 sixpacks (6 or 7 drinks) more
9. Is drinking an expected part of getting together with your friends?	yes no
10. Do one or more of your close friends drink heavily?	yes no

How Much/ How Often?

Below is a summary of research on FAS dealing with alcohol levels and their risks to unborn babies.

AN AVERAGE OF MORE THAN FOUR DRINKS PER DAY:

- greater risks of both full and partial FAS
- sleep disorders
- poor muscle tone, jitteriness, poor sucking response
- mental retardation
- greater risk of baby's death, both before and after birth

AN AVERAGE OF TWO TO FOUR DRINKS PER DAY:

- growth delays before birth
- visible signs of growth differences
- an inability to develop like other infants
- an inability to behave like other infants
- slower body activity
- greater shakiness, poor muscle tone
- poor sucking response

FIVE OR MORE DRINKS AT A TIME, RANGING FROM TWICE PER WEEK TO TWO OR THREE TIMES PER MONTH:

- irregular brain formation

(from the National Council on Alcoholism, Prevention and Education)

case studies . . .

11

1.

One of the doctors at the meeting said, "I drank during my last pregnancy. Not a lot, but I'd have a cocktail before dinner and maybe a glass of wine. When my son was born, he turned out not to be as bright as his brother and sister. He worked very hard in school and always brought home only average grades. Today he's one of the finest young men you'd ever meet — charming and hard working. . . . But he still isn't bright like our other kids. I really believe that I sipped away his I.Q., a point at a time. Now I tell all my pregnant patients: NO ALCOHOL AT ALL!"

2.

Pat leaned back in her chair, hands folded in her lap, and began to talk softly.

"I couldn't cope with anything. When I got pregnant the third time in four years, I was a basket case. My husband was working on his engineering degree at the University of Florida. He was also working part time to support us all. I was so lonely I thought I was going to die. All I had to do was to look after two babies all the time. Alcohol made me feel better. I really believed it made me a better mother because I wasn't so grouchy all the time. Was I wrong!

"I got to where I was having two or three shots of whiskey a day. I had heard that beer does not hurt the baby, so I was drinking five or six beers in a day, too. I did not feel that I was taking too much of a risk. After all, you can just **feel** it when you are drinking too much or it is dangerous for your baby. Or at least I thought you could. One of my friends drank five or six glasses of hard liquor a day during her pregnancy and her baby is healthy. She assured me that I was not hurting my baby.

"When Janie was born, she looked different. Her head was unusually small and she just looked different. The doctor said she had Fetal Alcohol Syndrome. Usually children with this problem are mentally retarded. We called a local Association for Retarded Citizens. They helped us find a good program to help Janie at an early age. She is in the third grade now. Janie is still slow to learn things and small for her age. However, all the extra care she has gotten is helping her develop the ability to live a happy life.

"Janie will always be mentally retarded. I can't change that. But I am so grateful that I have a chance to tell other mothers what happened to me. This doesn't have to happen to them!"

lifestyle . . .

These case studies clearly show how a pregnant woman's LIFESTYLE affects the development of her baby. Both social and problem drinking present considerable risks to pregnant women. Unfortunately, we live in a high-risk society. Alcohol is shown as desirable in every public medium, from radio and television to magazines, books, and movies. We grow up "brainwashed" to consider alcohol a part of our lives that poses few problems if we control it. The truth is that, controlled or not, alcohol causes mental retardation and other birth defects. Each year, up to 36,000 babies are born with some kind of alcohol-related birth defect. For pregnant women, a lifestyle that includes alcohol becomes a "deathstyle."

Moving Toward a Low-Risk Lifestyle

Look back at page 9 and list the three highest-scoring items on the questionnaire.

1.

2.

3.

Is there anything you could do to lower the risk of having a baby with birth defects? Remember that not drinking any alcohol at all is one of your choices. You can reduce your risk of having a baby with ARBD to ZERO.

Attitudes and behavior are closely related to each other. However, we cannot say that one causes the other. Obviously, people sometimes do things that they know are unhealthy, such as drinking alcohol. They sometimes avoid activities they have positive attitudes about, such as exercise. Generally speaking, however, our attitudes contribute to our behavior. The things we do often contribute to our attitudes about those actions. A real risk factor, then, is the attitude of our society toward alcohol use. Since we tend to conform to the behavior of people around us, a pregnant woman could have a high-risk behavior without ever examining her attitudes. She may be drinking because her friends drink.

Information affects both attitudes and behavior sometimes. And attitudes and behavior often block information from doctors and others. Those who try to help are sometimes ignored or resisted. Consider the case of a woman who drinks heavily during her pregnancy. When the doctor tells her of the risk to her baby, she continues to drink. "It'll never happen to me," she thinks. She resents her doctor's advice. She believes that he is preaching to her.

Below are some attitudes about drinking that are common in our society.

"When it's time to relax, it's time for a beer."
"A little bit won't hurt, even if you're pregnant."
"Beer and wine are not as harmful as hard liquor."
"Everybody drinks."
"Getting drunk is all right on special occasions."

Photo: Ron Duncan, Fort Worth, Texas

A common error is the belief that beer and wine are not as harmful as hard liquor. In the following illustration, you can see that a can of beer, a glass of wine, and a cocktail all have about the same amount of pure alcohol.

4 oz. wine
x 12% alcohol
.48 oz. alcohol

12 oz. beer
x 4% alcohol
.48 oz. alcohol

1.2 oz. of liquor
x 40% alcohol
.48 oz. alcohol

As they are stated, the attitudes on the previous page are not based on truth. Other beliefs that may lead pregnant women to think that alcohol will not hurt their babies are:

- The important thing about drinking is controlling it.
- If it were really harmful to pregnant women, the government would make the manufacturers label it, like cigarettes.
- There aren't many recreational activities that do not involve drinking.
- It will hurt your host's feelings if you don't drink.
- You'll miss all the fun if you don't drink.
- Drinking makes you feel good.
- Nobody will go out with you if you don't drink.

Friends often apply pressure to drink alcohol. Sometimes not going along with the crowd is very difficult. No one wants to be thought an oddball. However, when it comes to drinking during pregnancy, the consequences fall heavily on the pregnant woman.

Where are the friends when the child is born? When he or she cries all night? When he or she starts to school? Alcohol's effects are permanent. Birth defects are an enormous price to pay for following friends. Birth defects cheat the parent who has to care for the child. They rob the child who loses his or her right to physical and mental health.

Friends are not the only source of high-risk pressures, however. Take a look at the following family considerations. Are any of them high-risk for you?

- alcoholic parents?
- drinking in the home?
- too much free time?
- alcohol-abusing relatives?

THE BOTTOM LINE . . .

This strategy works because YOU stay in control. Simply identify your low-risk or no-risk behavior and make that your "bottom line." It works this way:

Friend: "I have a bottle of wine in my car. Let's go have a drink."
You: "No, thanks. I'm not going to drink while I'm pregnant."
Friend: "Just two drinks. It won't hurt."
You: "I've decided not to drink while I'm pregnant."
Friend: "Are you mad at me? You used to be a lot more fun."
You: "I understand why you'd think that, but I'm not going to drink while I'm pregnant."
Friend: "Is there an echo in here? Why do you keep saying the same thing?"
You: "Because I've decided not to drink while I'm pregnant."

You get the idea. No matter what argument they give you, you repeat the bottom line. Tempers might flare, yours and theirs. But they will eventually have to give up and honor your decision not to drink.

ASSERTIVENESS

Another source of ways to say no are books on assertiveness training. *When I Say No, I Feel Guilty* is especially good. Your librarian can help you find other titles. An assertiveness training instructor would be another good source of information. Perhaps you can get one to visit your class or social group. Or maybe there are classes at the local junior college in assertiveness training. This is well worth the time for people who tend to go along with the crowd and forfeit their own well-being.

The last method of saying "NO THANKS" is to JUST SAY "NO"!

"No, thanks, I'm driving."
"No, thanks, I've got to study."
"No, thanks, I'm not interested."
"No, thanks, I'm pregnant."
"No, thanks, I'm on a diet."
"No, thanks, I don't drink."
"No, thanks, I don't like it."

Photo: Ron Duncan, Fort Worth, Texas

MESSAGE TO FATHERS

It is the mother's responsibility to know how to care for the unborn baby during pregnancy . . . right?

She will do most of the child care . . . right?

She is best equipped to know how to handle issues about pregnancy . . . right?

It is her body she is taking care of . . . right?

It is her own fault if she drinks too much during pregnancy . . . right?

MAYBE NOT!

You can help the mother prevent a disability in your child.

You can share the responsibility of giving your baby the best possible start.

You can support the mother's decision not to drink alcohol during pregnancy.

Creative discussion

Some years ago, there was a movement in this country to do away with school taxes. Some people thought that people who owned property did not necessarily have children in public schools. Hence, they should not be taxed for schools. This motion was opposed and eventually defeated, for the following reason.

A society's future depends upon an educated electorate. Since the people who own property have a very real investment in the continued well-being of that society, it is in their best interests to support public schools. The situation remained unchanged: schools are supported through property taxes, regardless of whether or not the property owners have children.

The same principle applies to the question of birth defects. All people in society have a very real interest in the health and well-being of its citizens. There are no people who are not responsible for prevention of birth defects.

What are your opinions regarding the responsibilities of the following (pertaining to birth defects PREVENTION?)

- the elderly?
- politicians
- children
- high school and college students
- teachers
- ministers and counselors
- doctors and nurses
- boyfriends and husbands

III. COMMUNITY ACTION:

HOW TO . . .

When you talk to others about prevention, remember the following:

- BE OPTIMISTIC. Stress the fact that FAS is preventable.
- BE HONEST. Tell the truth about maternal alcohol use.
- STRESS POSITIVE EXPECTATIONS. Remember that not all women who drink excessively have babies with birth defects. Concentrate on reducing the risk.
- STRESS THE FACT THAT HELP EXISTS, from doctors, counselors, Alcoholics Anonymous, alcohol treatment programs, and the Association for Retarded Citizens.
- TAKE THE FACT SHEET ON FAS AND ARBD (following page) WITH YOU.

FACT SHEET

FETAL ALCOHOL SYNDROME (FAS) and ALCOHOL-RELATED BIRTH DEFECTS (ARBD)

1. WHAT ARE FAS AND ARBD?

Fetal Alcohol Syndrome (FAS) is a particular pattern of three or more birth defects caused when a woman drinks alcohol during pregnancy. Alcohol-Related Birth Defects (ARBD) includes less severe birth defects of the same pattern.

2. HOW ARE FAS AND ARBD CAUSED?

Alcohol is a teratogen (ter-AT-o-gen), a poison for the unborn baby. Nourishment for the unborn baby comes through the mother's placenta (pla-CEN-ta). Alcohol also passes freely from mother to child through the placenta. When a pregnant woman drinks alcohol, therefore, the same amount of alcohol that is in her blood is also in her baby's. However, while an adult's liver is able to handle alcohol at the rate of an ounce of alcohol every two hours, a baby's liver cannot. High concentrations of alcohol stay in the baby's body longer . . . often as long as 24 hours. Alcohol can do the most damage when the unborn baby is developing his or her vital organs.

3. IS THERE A SAFE AMOUNT OF ALCOHOL THAT A PREGNANT WOMAN MAY DRINK?

No. A safe level of alcohol use for pregnant women has not been established. Alcohol-Related Birth Defects (ARBD) have shown up in babies whose mothers drank one or two drinks per day. As much as six drinks per day may cause Fetal Alcohol Syndrome.

4. IS ALCOHOL SAFE AT ANY TIME DURING PREGNANCY?

No. Researchers have not established a safe time to drink during pregnancy. Doctors divide pregnancy into three-month periods called trimesters (tri-MES-ters). The first three-month period of pregnancy is when developing organs are most at risk of damage. Women do not even know that they are pregnant during part of this time. During the second trimester, the mother's use of alcohol can increase the chances of sudden death of the unborn baby or expulsion from the mother's body (called spontaneous abortion). Alcohol use during the final trimester can interfere with the growth of the baby . . . including the growth of the brain.

arc

Association for Retarded Citizens of the United States, 2501 Ave. J, Arlington, Texas 76006 (817) 640-0204

5. WHAT ARE THE PROBLEMS OF CHILDREN BORN WITH THESE DISORDERS?

Typically, children born with FAS and ARBD have the following symptoms:

- Low weight at birth and failure to catch up with others of the same age
- Head:
  - Small head size
  - Narrow eye slits
  - Flat midface
  - Low nasal ridge
  - Loss of groove between nose and upper lip
- Central nervous system:
  - Mental retardation
  - Alcohol withdrawal at birth
  - Poor sucking response
  - Sleep disturbances
  - Restlessness and irritability
  - Delays in development
  - Short attention span
  - Learning disabilities
- Organs and parts of the body:
  - Muscle problems
  - Bone and joint problems
  - Genital defects
  - Heart defects
  - Kidney defects

6. HOW MANY BABIES ARE BORN WITH FAS OR ARBD?

The Public Health Service estimates that FAS occurs in approximately one of every 750 live births. Less severe Alcohol-Related Birth Defects occur in approximately 10-12 per 1000 live births, or 36,000 each year. However, 30% of the babies of known alcohol-abusing mothers have FAS!

7. HOW CAN FAS BE TREATED?

Surgery can repair some of the physical problems. Schools and day care centers offer programs to improve mental and physical development. However, Alcohol-Related Birth Defects are permanent. Children with FAS remain below average in physical and mental development.

This document is available due to contributions from:
Civitan International Foundation, Crown Development Trust Fund Incorporated, Zeta Tau Alpha Fraternity, Elizabeth Boggs, Ph.D., and the American Contract Bridge League.

Photo: Ron Duncan, Fort Worth, Texas

Healthy Child

QUICK CHECK:

Do you know . . .

What the Surgeon General said in his report on maternal use of alcohol during pregnancy?

The various risks of different levels of alcohol used by pregnant women?

The kinds of birth defects caused by alcohol?

The correct way to talk about prevention effectively?

Whether you have a lifestyle that might lead you into having a baby with FAS or ARBD?

Whether the messages you are receiving from friends, family, and society are high- or low-risk to your future children?

Whether there is a place for you in prevention work?

How to refuse alcohol when it is not in your baby's best interest to drink it?

Why FAS is as much a concern for men as for women?

CREATIVE QUESTIONS

What is wrong with the statements below? What would you do if someone told these things to you during your prevention work? How can you respond according to the suggestions on page 17?

"I got drunk before I knew I was pregnant, and now I'm so scared about my baby's health that I can't stand it!"*

"Women who can't stop drinking are in real trouble. It looks as though they are destined to have a child with mental retardation."

"What I do before my baby gets here is my doctor's responsibility."

"Our society is doomed because so many people drink alcohol that it's impossible to prevent these birth defects."

Photo: Ron Duncan, Fort Worth, Texas

Healthy Children

** Recent studies indicate that whenever drinking is stopped during pregnancy, the risk of FAS or ARBD is decreased.*